Clinical Case Study: Enhancing Efficiency and Patient Experience with the DEXIS IS 3800W

John Zalesky, DMD, MBS, FICOI, FAGD



Dr. Zalesky balances his time between treating patients at his Colorado-based private practice, Aurora Hills Dental Family & Cosmetic Dentistry, and teaching the next generation of dentists as a part-time faculty member at the University of Colorado School of Dental Medicine and a proud member of the Catapult Education Speaker's Bureau.

He currently serves as the Executive Director and Treasurer for Region 14 of the Academy of General Dentistry which oversees multiple states in the western U.S. as well as Hawaii. Regularly listed among Colorado's Top Dentists by 5280 Magazine, Dr. Zalesky was also recently included in the Top 40 under 40 by Incisal Edge Magazine.

Dr. Zalesky earned his Master of Biomedical Science from the University of Medicine and Dentistry of New Jersey School of Biomedical Sciences, and was awarded his DMD degree from Nova Southeastern University College of Dental Medicine. Following his residency at the Denver Medical Health Center, Dr. Zalesky completed advanced training as Chief Resident at the University of Colorado School of Dental Medicine General Practice Residency, where he focused on implants and complex prosthodontic cases.

He performs a wide range of procedures in his practice, including advanced surgery, implants, Pinhole Surgical Technique, all-on-four, full mouth rehabilitation, and orthodontics.

Dr. John Zalesky and his team at Aurora Hills Dental place a priority on providing an exceptional patient experience. To support better patient outcomes and satisfaction, his practice embraces a complete digital workflow that enables his team to deliver a full spectrum of high-level care under one roof. His investment in digital tools has also driven improvements in efficiency and accuracy, as well as patient comfort and convenience.

"Patients don't like going to multiple doctors for a procedure," says Dr. Zalesky. "When we're able to see a whole case through from start to finish, patient-doctor communication and trust improves; patients feel more comfortable and more likely to accept care — which in turn, leads to better outcomes."

The digital workflow Dr. Zalesky's practice uses typically begins with capturing intraoral scans using his preferred solution, the DEXIS IS 3800W wireless intraoral scanner (Figure 1).

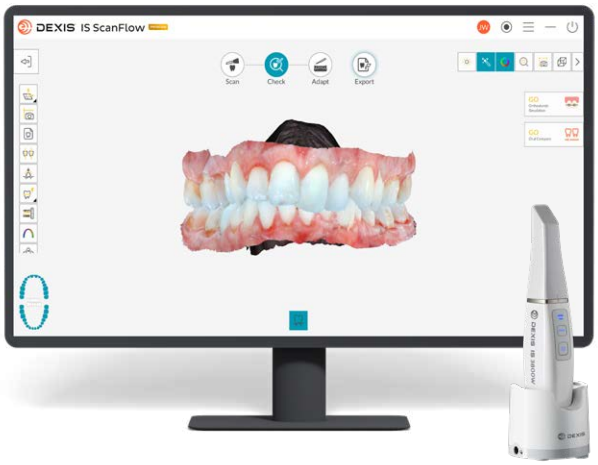


Figure 1: DEXIS IS 3800W intraoral scanner and IS ScanFlow software

DEXIS

“I only take traditional impressions when I absolutely have to,” Dr. Zalesky explains. “With traditional impressions, the patient sits with goop in their mouth for up to 5 minutes, and you sometimes wind up with a void that requires a whole new impression the patient has to sit through.”

“A digital scan enables us to digitally manipulate the models and see everything you need to have a good final outcome — the margins, occlusion, and tissue architecture,” he says. “When we send the scans to the lab, they have all the information they need to eliminate any guesswork. And if you do see an issue, the digital software allows you to zoom in to pinpoint, cut out, and rescan just that area without having to start over with a completely new scan.”

He adds, “It’s been a game-changer for me. Now we can provide impressions digitally instead of using traditional Polyvinyl Siloxane (PVS) impression material, which is great particularly for patients who have a gag reflex and can’t tolerate having an impression stuck in their mouth for five minutes.”

The advantages of digital scanning using the DEXIS IS 3800W came into play with a recent case for Dr. Zalesky involving a complete rework of existing crowns, and a patient looking to feel more comfortable and confident in her smile.

The Challenge

Dr. Zalesky’s practice inherited a patient who expressed her dissatisfaction with the existing crowns a previous doctor had completed on her upper teeth, ranging from canine to canine. In addition to being unhappy with the shade and contours, the patient felt that the shape of the veneers looked and felt too large for her face (Figure 2).



Figure 2: Initial extraoral documentation

“My first concern was making sure this patient was going to be pleased with the new restoration, including the shade and shape of the replacements,” Dr. Zalesky recalled. “We didn’t want her to go through this process, then still be dissatisfied with the way her smile looked and felt.”

To help ensure the patient's satisfaction with the results, Dr. Zalesky created a digitally designed wax up, which allows him to pre-plan the procedure and visually show the patient the final desired outcome. From that wax up, the lab fabricates a prep reduction guide as well as a matrix, which is used for chairside fabrication of provisionals to be made for the patient at the preparation appointment, prior to having the final restorations made (Figure 4).

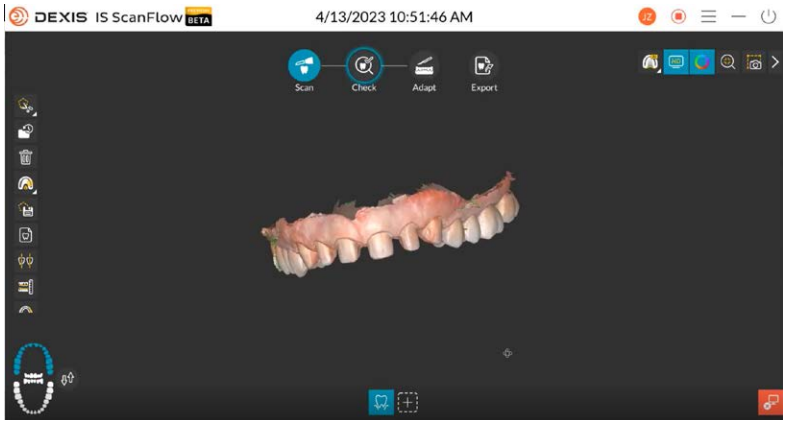
"That way, she could go home with the temporaries to test drive daily function (eating and speech), look in the mirror, ask her family and friends for their feedback, and make sure she's happy with them or let me know if she'd like any changes," he explains. "I find that spending time with the patient upfront, showing them scans and visuals, and letting them live for a while with the temps play a key role in improving the patient experience and satisfaction."

The Solution

To ensure a more natural, blended, and cosmetically pleasing shade-matching for the new restoration, Dr. Zalesky decided to extend the case with full coverage from teeth numbers six through 11 and 21 through 28. Dr. Zalesky and his team removed the existing dentistry, cleaned the prep area, and took careful steps to make sure the preparations provided the optimal restorative aesthetics and thickness of material. The IS 3800W played a pivotal role in achieving this.

"With the DEXIS IS 3800W scans, we were able to pre-plan every part of the treatment," he says. Using the DEXIS IS 3800W intraoral scanner, Dr. Zalesky captured a pre-treatment scan of the patient's upper and lower arches. He then sent the scans to the lab to have a wax up made. He also took a scan of the upper arch preparations to ensure the accuracy and fit of the final crowns (Figure 3).





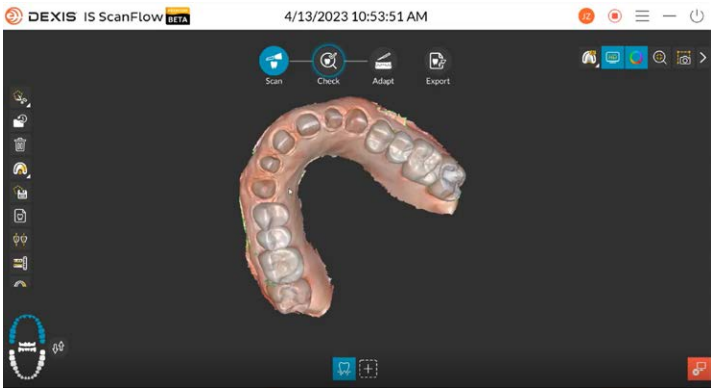




Figure 3: Upper arch preparation scan

"This allowed me to check every aspect of the scan in real-time to make sure that we'd captured all the information we needed, and most importantly, didn't miss any margins," he explains. "It also allowed me to see the occlusion and make sure there was enough clearance between the upper and lower arches. This was very helpful, because you don't normally see the clearance until the lab has mounted the case. With the digital intraoral scan, I can see the clearance right away and make any needed adjustments before sending it to the lab."

This level of visibility results in better accuracy and fit, which in turn minimizes the need for prep reduction copings or restoration remakes. "The patient gets the right fit the first time around, and I don't have to bring the patient back again," says Dr. Zalesky.



Figure 4: Upper arch printed model of preparations (buccal and lingual view), final restorations (buccal and lingual view), shade selection

The Outcome

After the upper crowns were completed and the patient was fitted with temporaries, she was so pleased with the results that she asked Dr. Zalesky to repeat the procedure on her bottom teeth (Figure 5).

“I ended up prepping all the work at once, saving the patient from having to return for multiple visits,” Dr. Zalesky recalls.



Figure 5: Lower arch printed model of preparations (buccal and lingual view), final restorations (buccal and lingual view), intraoral scan of lower preparations

By being able to pre-plan every step of the case, check the scan for accuracy and fit before sending the case to the lab, and enabling the patient to leave with temps she could try out, Dr. Zalesky was able to maximize the efficiency and productivity of his team, and focus more on the patient.

The fit of the new crowns were a success as well.

“I’m extremely picky when it comes to margins and the fit of crowns, veneers, and implants,” explains Dr. Zalesky. “Performing long-lasting dentistry comes down to mere microns, and if you’re relying on cement to fill, you won’t have the same accuracy. Which is where using the IS 3800W makes a real difference.”

The patient was thrilled with the final outcomes of her new restorations, as well as with the entire process and experience (Figure 6).



Figure 6: Post-treatment results

“Not only was she able to achieve the results she was hoping for, with a beautiful smile that truly reflected who she is, but we earned her confidence and trust in our practice,” says Dr. Zalesky. “That’s the true benefit of adopting a digital workflow, and of having an efficient, reliable, easy-to-use and high-quality solution like the IS 3800W wireless intraoral scanner as part of our digital practice.”

IS 3800W Features Deliver a Digital Advantage

For Dr. Zalesky, the DEXIS IS 3800W is the obvious choice for intraoral scanning that serves as the first step in his practice's digital workflow.

"I use the IS 3800W for everything: implants, orthodontic aligners, nightguards, crown and bridge, veneers," he says. "It's my go-to scanner for taking impressions and for removable cases where I need to intraorally scan digital edentulous ridges and overlay PVS impressions to stitch them together to get dentures that offer an amazing fit with no irritated spots. This leads to less patient post op appointments and increased satisfaction."

He and his team particularly appreciate the range of innovative IS 3800W features not found with other intraoral scanners.

Wireless Portability

"There aren't a lot of scanners on the market that are completely wireless," Dr. Zalesky explains. Weighing just 240 grams, the IS 3800W is also one of the lightest and most compact intraoral scanners available, with a comfortable grip in a portable solution that easily moves between operatories.

Interchangeable Tips

The IS 3800W comes with two tip sizes and styles (plus an optional posterior tip) that comfortably accommodate a range of patients and their oral anatomies. "A lot of scanners have just one tip size, which can make it difficult to get a good scan for patients who can't open as wide or when you have to get into a tight area, particularly in the posterior."

Image Quality

With a field of view of 16 mm x 14 mm and a depth of field ranging from -2 to +16, the IS 3800W captures a high level of detail even in interproximal areas and subgingival margins. "The images are very clear, and I can view them in true color or change to stone model, which I know a lot of doctors are familiar with," explains Dr. Zalesky.

Patient Education

The high-quality scans captured by the IS 3800W provide a powerful educational and learning tool for patients. "I can show the patient their scan chairside, so they can see in real-time a view of their dental structure that they can't otherwise see themselves," says Dr. Zalesky. "It's like we're standing on the tooth. I can show the patient where they have wear or other issues, so the patient can understand what's going on. This leads to increased treatment acceptance, which also increases my productivity."

Fast Scanning Time

With an ultra-fast scanning time of 25 seconds for a single arch, the IS 3800W frees up more time to focus on the patient. “I can scan the entire mouth, upper and lower arches, in about one-and-a-half minutes to one minute forty-five seconds,” says Dr. Zalesky. “This means less chair time for the patient, as well as more productivity for me and my team.”

Gesture Motion Control

Dr. Zalesky’s team takes advantage of the gesture motion control feature in the IS 3800W, which allows staff to orient the digital image on the screen by simply rotating the scanner wand itself. This eliminates the need to use a mouse or keyboard, which helps cut down on steps and staff time while reducing risks of cross-contamination.

See how the DEXIS IS 3800W supports your patient experience and outcomes.

Click here to explore the full features of the IS 3800W, or to schedule a product demo with a DEXIS team member.

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